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YANAGIDA SHIGEYUKI****(54) POSITION DETERMINATION APPARATUS****(57) Abstract:**

PROBLEM TO BE SOLVED: To provide a position determination apparatus by which the error of a position signal to be output by an inertial navigation system (INS) is estimated and a precise position signal is obtained.

SOLUTION: A position determination apparatus is provided with a speed-error measuring part 33 which measures the speed error of a navigating body when the navigating body is stopped and a position-error estimation part 35 which estimates a position error on the basis of the speed error measured by the speed-error measuring part and on the basis of its time differentiated value. The speed-error measuring part measures the speed error of the navigating body on the basis of a speed signal to be supplied by an inertial navigation system, and a position signal which is supplied by the inertial navigation system is corrected on the basis of the position error which is estimated by the position-error estimation part. The position-error estimation part estimates a speed error by using the Kalman filter.

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